REMARKS

Claims 1-15 are pending in the application.

Claims 2 and 9-14 have been cancelled. Claims 1, 3-8 and 15 have been amended.

New claims 16-21 have been added. New claim 16 recites the plant promoter according to claim 1, wherein the minimal promoter is from the same promoter as the first promoter. New claim 17 recites the plant promoter according to claim 1, wherein the minimal promoter is from the same promoter as the second promoter. New claim 18 recites the plant promoter according to claim 1, wherein the minimal promoter is from a third promoter, wherein the third promoter is different than the first and second promoters. No new matter has been added by way of these amendments, as support can be found in the specification, *e.g.*, at page 9, lines 26-29.

New claim 19 recites the plant promoter according to claim 4, wherein the minimal promoter is a RolD minimal promoter. No new matter has been added by way of this amendment, as support can be found in the specification, *e.g.,* at page 11, lines 3-6.

New claim 20 recites the plant promoter according to claims 4 or 19, wherein the RolD promoter is an *Agrobacterium rhizogenes* RolD promoter. No new matter has been added by way of this amendment, as support can be found in the specification, *e.g.*, at page 13, lines 15-17.

New claim 21 recites the plant promoter according to claim 1, wherein the expression pattern of the first promoter and the expression pattern of the second promoter are at least 5% in

all plant parts in which the first and second promoters overlap. No new matter has been added by way of this amendment, as support can be found on page 10, line 3.

Thus, after entry of this amendment, claims 1, 3-8 and 15-21 will be pending in this application. Applicants respectfully request reconsideration of these pending claims.

I. Objection to the Drawings

Applicants are submitting revised Figures 2-4 herewith. Applicants submit that the drawings are in compliance with 37 C.F.R. §§ 1.84 and 1.152.

Accordingly, Applicants respectfully request that this objection be reconsidered and withdrawn.

II. Objection to Claims

Claim 4 was amended to correct the typographical error "ferrodoxine" and to recite instead "ferredoxin."

III. Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 1-8 and 15 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Several grounds of rejection have been set forth (Paper No. 14, pages 3-9). For completeness, each ground of rejection will be addressed individually.

(a.) Absence of article.

Claims 1-8 and 15 have been amended to recite an article in the preamble of the claims.

No new matter has been added by way of this amendment.

(b.) Recitation of "minimal promoter."

Independent claim 1 has been amended to recite that the minimal promoter comprises a TATA box and initiation site.

No new matter has been added by way of this amendment, as support can be found, *e.g.*, at page 4, lines 33-35.

(c.) Recitation of "complementary pattern"

Applicants have amended claim 1 to delete the "level of transcription" language and to recite instead that the transcription-activating elements have complementary expression patterns in a plant, wherein the expression pattern of the first promoter and the expression pattern of the second promoter are at least 1% in all plant parts in which the first and second promoters overlap.

No new matter has been added by way of this amendment, as support can be found in the specification, *e.g.*, at page 5, lines 14-20 and page 9, line 30 – page 10, line 4.

The Examiner acknowledges (Paper No. 14, page 5) that the specification defines "expression patterns" as being "complementary" when "the expression pattern of one promoter shows little overlap with the expression pattern of the other promoter" (specification, page 5, lines 18-20). However, the Examiner opines that "it is unclear if that indicates that if two promoters have any level of transcription in the same cell tissue it would be considered overlap, hence not complementary, even if one promoter drives high levels of expression and the other promoter drives only very low levels of expression in the common tissue" (Paper No. 14, page 5) (emphasis added).

Applicants note that the specification states that

> [i]t seems to be necessary, however, that both promoters have a low expression value in the tissues and developmental stages which are specific for the other promoter. It has been established that, for being suitable, the transcriptional activity in the plant parts where expression is low should be preferably ≥1% of the level of transcription which is reached in plant parts where transcriptional activity is high (page 8, lines 16-22) (emphasis added).

Similarly, the specification also states that, for example,

> transcription activating DNA fragments that direct high level root expression and with lower leaf and stem expression levels are combined with elements that direct expression mainly in the leaf and stem, but lower in the root.
>
> Preferentially, the level of expression in the parts where expression is lowest does not fall below 1% of the level obtained in the highest part. Most preferred is the situation where the relation between lowest expression and highest expression between plant parts is larger than 5% (page 9, line 30 – page 10, line 4) (emphasis added).

Thus, the specification teaches that complementary expression patterns can exist when expression occurs in the same plant tissue, wherein the expression pattern of the first promoter and the expression pattern of the second promoter are at least 1% in all plant parts in which the first and second promoters overlap.

(d.) Recitation of the word "elements"

Claim 1 has been amended to clarify that the "elements" are transcription-activating elements.

Claim 1, as amended, now recites that the plant promoter comprises transcription-activating elements from a first promoter, and transcription-activating elements from a second promoter, wherein said first and second promoters are different, and wherein said transcription-

activating elements from the first and second promoters have complementary expression patterns.

No new matter has been by way of this amendment. Support for the recitation of transcription-activating elements from both first and second promoters can be found in the specification, *e.g.,* at page 8, lines 9-14. Support for the recitation that the first and second promoters are different can be found in the specification, *e.g.,* at page 8, lines 25-29.

(e.) Recitation of "which"

Claim 1 has been amended to delete the word "which" and to recite instead "wherein."

No new matter has been added by way of this amendment.

(f.) Recitation of "most plant parts"

Claim 2 has been cancelled herein. Thus, this ground of rejection has been rendered moot.

(g.) Recitation of "specifically active"

Claim 3 has been amended to delete the "specifically active" language, and to recite instead the plant promoter according to claim 1, wherein the first promoter is specifically expressed in green parts of a plant, and the second promoter is specifically expressed in underground parts of the plant.

No new matter has been added by way of this amendment, as support can be found in the specification, *e.g.* at page 5 (lines 5-7).

(h.) Recitation of "other promoter"

Claim 3 has been amended to delete the "other promoter" language and to recite instead that the first promoter is specifically expressed in green parts of a plant, and the second promoter is specifically expressed in underground parts of the plant.

No new matter has been added by way of this amendment, as support can be found in the specification, *e.g.,* at page 3, lines 14-16.

(i.) Recitation of "while"

Claim 3 has been amended to delete the "while" language and to recite instead "the plant promoter according to claim 1, wherein the first promoter is specifically expressed in green parts of a plant, and the second promoter is specifically expressed in underground parts of the plant."

No new matter has been added by way of this amendment.

(j.) Recitation of "the plant"

Claim 3 has been amended to recite "in green parts of a plant."

No new matter has been added by way of this amendment.

(k.) Recitation of "the ferredoxin and the RolD promoter"

Claim 4 has been amended to recite that the first promoter is a ferredoxin promoter and the second promoter is a RolD promoter.

No new matter has been added by way of this amendment.

(l.) Recitation of "minimal promoter element"

Claim 5 has been amended to clarify that the minimal promoter is a ferredoxin minimal promoter.

No new matter has been added by way of this amendment, as support can be found in the specification, *e.g.*, at page 11, lines 4-6.

(m.) Recitation of "derived from the ferredoxin promoter"

Claim 5 has been amended to recite that the minimal promoter is a ferredoxin minimal promoter.

No new matter has been added by way of this amendment, as support can be found in the specification, *e.g.*, at page 11, lines 4-6.

(n.) Recitation of "derived from *Arabidopsis thaliana*"

Claim 6 has been amended to recite that the ferredoxin promoter is an *Arabidopsis thaliana* ferredoxin promoter.

No new matter has been added by way of this amendment, as support can be found in the specification, *e.g.*, at page 10, lines 15-17.

(o.) Recitation of "the promoter of claim 1"

Claim 15 has been amended to clarify that the "promoter" being referred to is the "plant promoter" of claim 1, and not the "minimal" promoter, the "first" promoter, or the "second" promoter.

No new matter has been added by way of this amendment.

Thus, Applicants submit that claims 1, 3-8 and 15-21, as amended, are in compliance with 35 U.S.C. § 112, second paragraph.

Accordingly, Applicants respectfully request that these grounds of rejection be reconsidered and withdrawn.

IV. Rejection Under 35 U.S.C. § 102(b)

Claims 1-3 and 15 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Gelvin *et al* (WO 95/14098), as evidenced by Kononowicz *et al.* (*The Plant Cell* 4:17-27 (1992)). The Examiner opines that the chimeric plant promoters of Gelvin *et al.*, which comprise enhancer elements from the mannopine synthase gene (*mas*) and the opine synthase gene (*ocs*), anticipate the plant promoter of the instant invention.

Applicants respectfully traverse this ground of rejection.

Gelvin *et al.* discloses that the *mas* promoter has strong expression in roots and weak expression in leaves (page 3, lines 20-21).

Kononononwicz *et al.* discloses that the "16-bp palindrome [of *ocs*] directs the expression of the *ocs* promoter in specific cell types in the leaves, stems, and roots of transgenic tobacco plants. This expression is especially strong in the vascular tissue of the leaves, leaf mesophyll cells, leaf and stem guard cells, and the meristematic regions of the shoots and roots" (page 1, Abstract, lines 7-10). That is, the *ocs* promoter is "especially strong" in both the green parts and the underground parts of the plant.

Independent claim 1 recites that the transcription-activating elements from the first promoter and said transcription-activating elements from the second promoter have complementary expression patterns in a plant. The specification defines "expression patterns" as being "complementary" when "the expression pattern of one promoter shows little overlap with the expression pattern of the other promoter" (specification, page 5, lines 18-20) (emphasis added). Because the *mas* promoter is expressed strongly in roots and weakly in leaves, and the *ocs* promoter is expressed strongly in *both* the leaves and roots, the expression patterns are not complementary, as recited in independent claim 1.

Thus, Gelvin *et al.*, as evidenced by Kononowicz *et al.*, does not anticipate independent claim 1.

These references also do not anticipate dependent claims 2-3 and 15 (nor any other claim), which depend directly from claim 1, and, thus, contain all the limitations thereof.

Accordingly, Applicants respectfully request that this rejection be reconsidered and withdrawn.

V. Conclusion

In view of the foregoing remarks, Applicants respectfully submit that this application is now in condition for allowance. If a telephone interview would advance prosecution of the application, the Examiner is invited to call the undersigned at the number listed below.

A Petition for a three (3) month Extension of Time under 37 C.F.R. § 1.136(a) is filed concurrently herewith, which extends the response period from 27 May 2002 to 27 August 2002. The Petition further authorizes the PTO to charge the three month extension fee of $920 to our Deposit Account No. 08-0219.

Applicants believe no fees are due in connection with this Amendment. However, if there are any other fees due in connection with the filing of the response, please charge the fees to Deposit Account 08-0219. Also, please charge any fees underpaid or credit any fees overpaid to the same Deposit Account.

Respectfully submitted,

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Date: 7/11/03

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